

Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Service Category Vehicle Exterior

Section Sliding Roof/Convertible

Market USA

Toyota Supports ASE Certification 

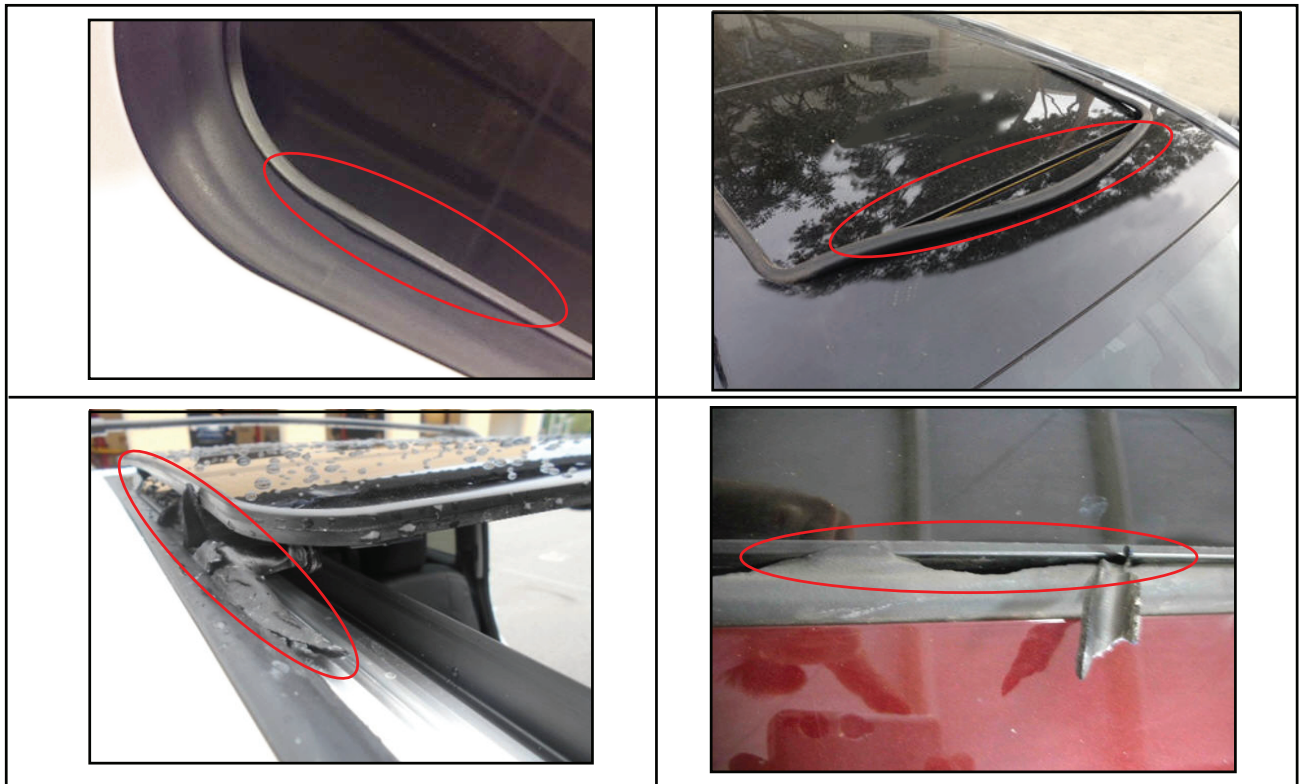
Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2014 – 2015	Highlander, Highlander HV	Plant Code(s): S WMI(s): 5TD

Introduction

Some 2014 – 2015 model year Highlander/Highlander HV vehicles may exhibit a condition in which the panoramic sunroof seal is bulging, not sitting properly, torn, has water or air leaks into the vehicle cabin, has poor appearance, or is tucking in any corner. This condition can also be exhibited during the function of the panoramic sunroof, in which the seal may tear or separate from the housing. Follow the procedures in this bulletin to address these conditions.

Figure 1.



Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Production Change Information

This bulletin applies to vehicles produced **BEFORE** the Production Change Effective VINs shown below.

MODEL	ENGINE	PRODUCTION CHANGE EFFECTIVE VIN
Highlander	2GR-FE	5TDYKRFH#FS069293
		5TDKCRFH#FS069293
		5TDZKRFH#FS069293
		5TDDKRFH#FS133004
	1AR-FE	5TDJKRFH#FS133004
		5TDBKRFH#FS133004
Highlander HV	Hybrid	5TDZARFH#FS012697
		5TDDCRFH#FS009943
		5TDJCRFH#FS009943
		5TDBCRFH#FS009943

Warranty Information

OP CODE	DESCRIPTION	TIME	OFP	T1	T2
BD1514	R & R Panoramic Roof Seal	7.5	63251-0E050	62	13

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

Parts Information

PART NUMBER	PART NAME	QTY
63251-0E050	Weatherstrip, Sliding Roof	1

Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Repair Procedure

1. Confirm condition is present.
2. Remove panoramic roof assembly from vehicle per Repair Manual Instructions

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

- 2014 Highlander:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#)”
- 2015 Highlander:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#)”
- 2014 Highlander HV:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#)”
- 2015 Highlander HV:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#)”

NOTE

- It is recommended that more than 1 person is involved when removing the Headliner assembly to prevent damage or creases.
- It is recommended that more than 1 person is involved to remove the panoramic roof housing assembly from the vehicle. This housing is heavy and any damage incurred during removal may negatively affect this repair attempt.
- Ensure that glass is placed in a safe location to avoid potential damage.

3. Remove original seal from housing.

Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

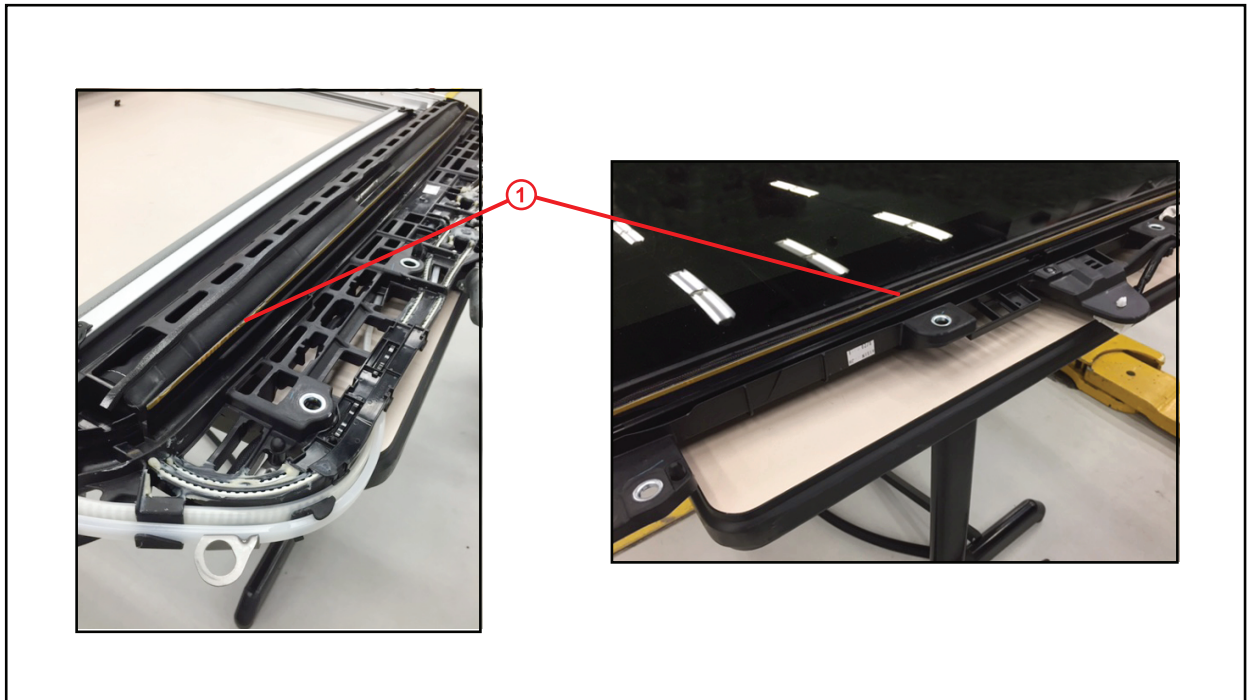
Repair Procedure (Continued)

4. Ensure that the tape is flat and flush against the panoramic roof housing.

NOTICE

Do NOT remove the tape or the film protecting the surface on the tape of either the front or rear portion of the housing. This is necessary to ensure proper seal engagement and placement.

Figure 2.



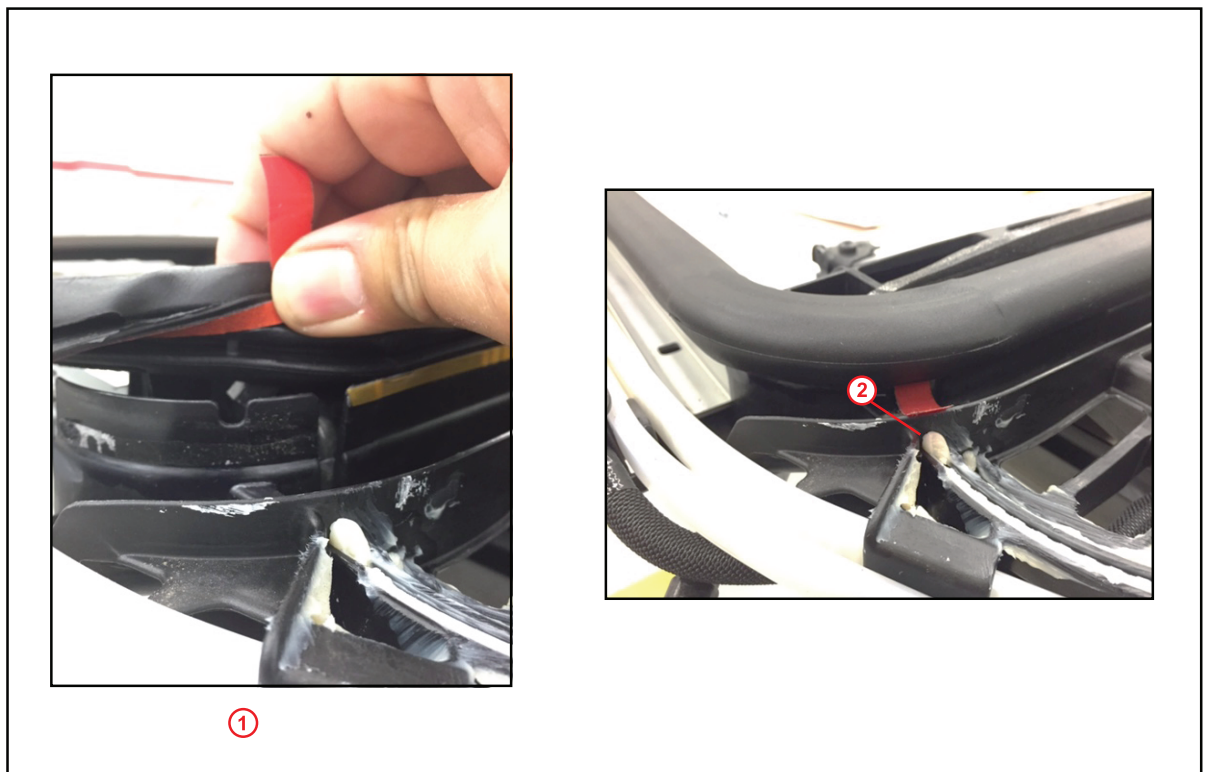
1	Double-sided Tape
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Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Repair Procedure (Continued)

5. Install the seal onto the housing.
 - A. Loosely lay the seal out onto the housing.
 - B. Line up the rear corner locating tabs on the panoramic roof seal to the rear indents in the panoramic roof housing. This ensures proper placement and applies to both the left and right sides of the seal. Then install the corners onto the housing as shown.

Figure 3.



1	Line Up Locating Tab on panoramic Roof Seal
2	Installed

- C. Once finished on the rear corners, move onto the front corners and repeat the same process.

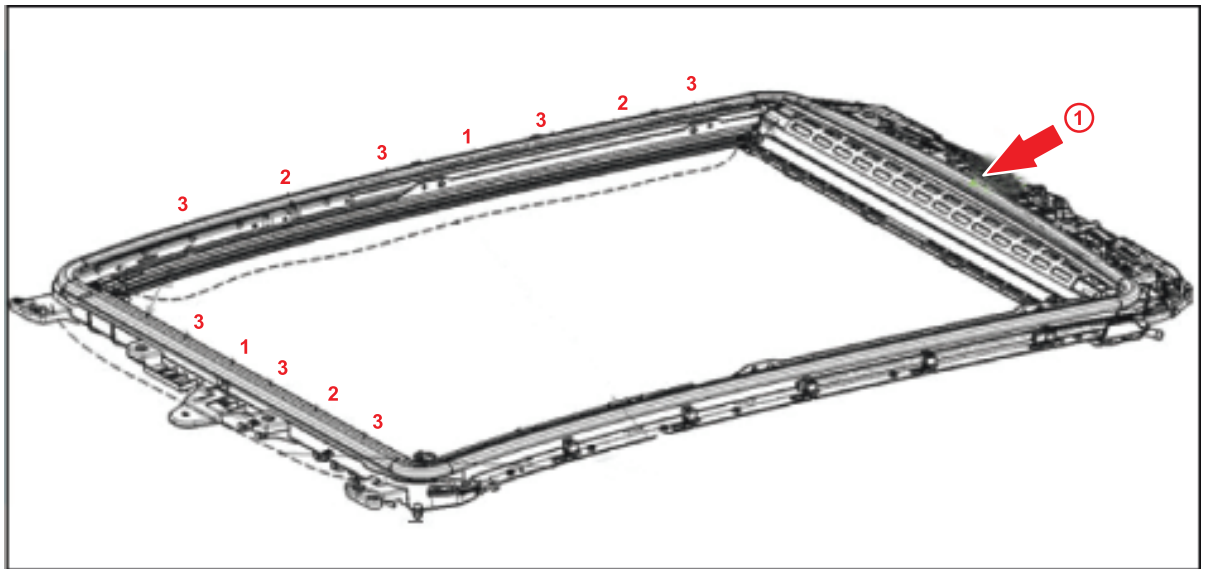
Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Repair Procedure (Continued)

- D. While doing an inward to outward rocking motion with your hands and applying downward pressure to install the seal onto the housing (see attached video "installation Process"), follow the sequence below to ensure correct fitment of the seal to housing. Start with the rear section of the housing.

[Installation Process.wmv](#)

Figure 4.

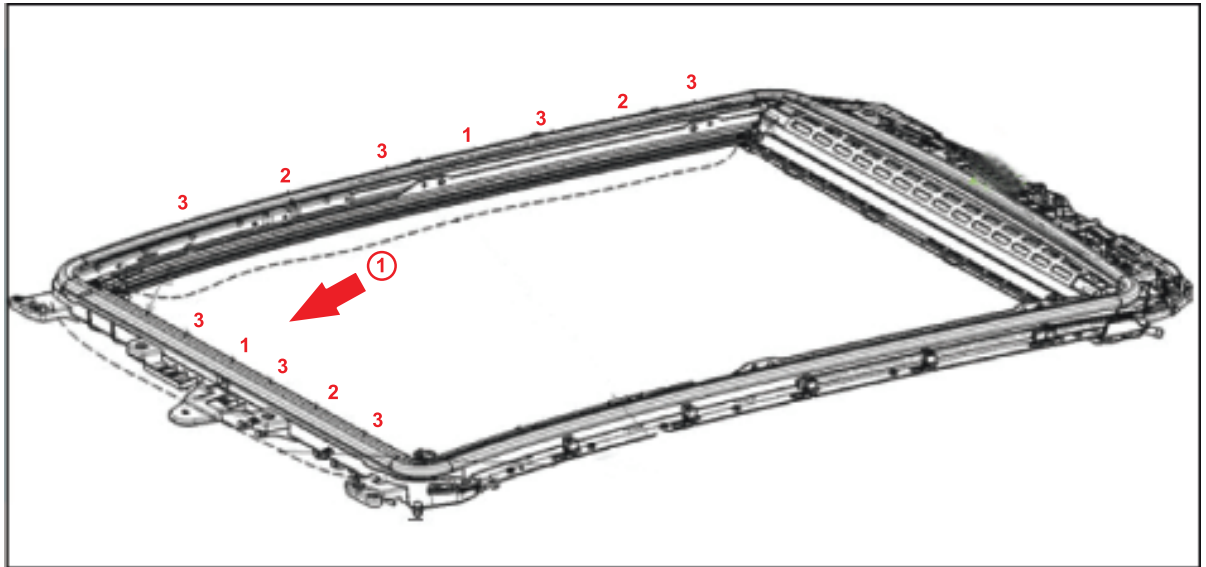


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Repair Procedure (Continued)

E. Continue with the front of the seal using the same sequence as above.

Figure 5.



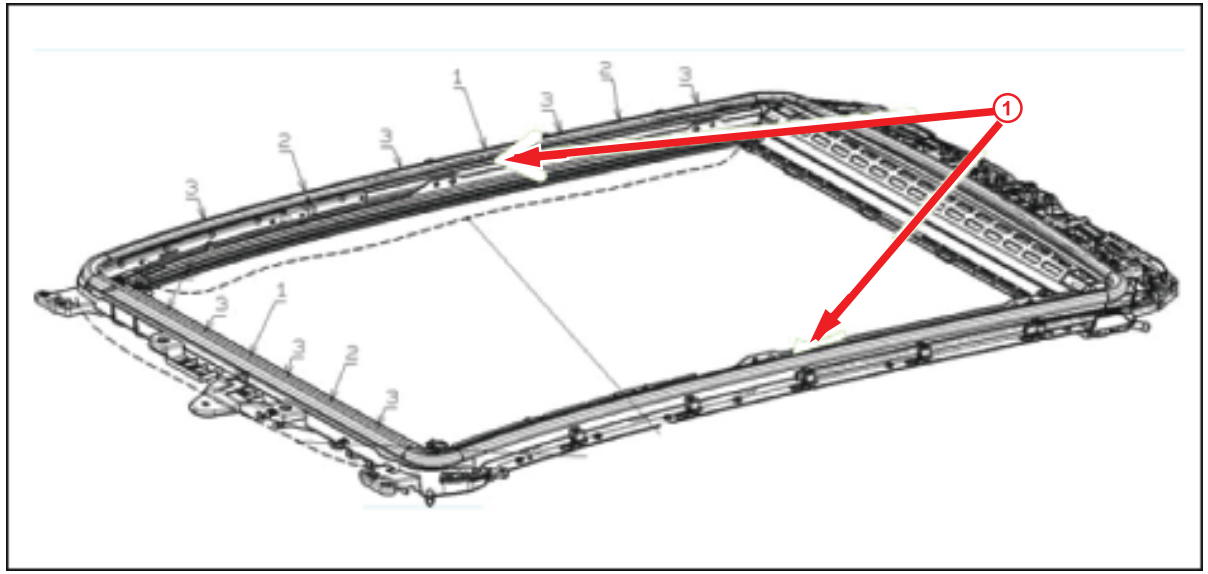
1	Continue Here
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Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

Repair Procedure (Continued)

F. Finish with the sides using the sequence shown.

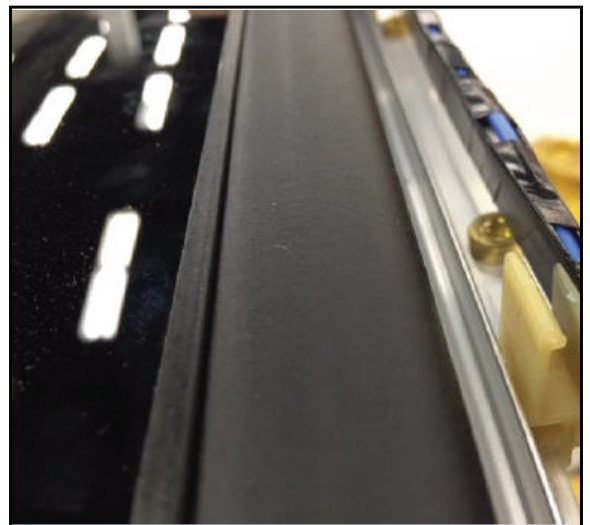
Figure 6.



1	Finish Here
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G. Confirm seal is seated correctly and is flat and smooth. The goal is for the seal to sit flush, flat, and even.

Figure 7.



Panoramic Sunroof Seal Tear/Poor Appearance/Air or Water Leak

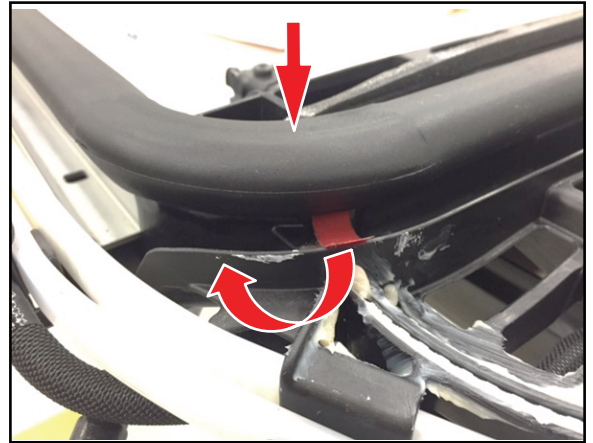
Repair Procedure (Continued)

- H. Once the seal is confirmed to be installed correctly and the surface has been cleaned to aid in adhesion, remove the tape protective film used to hold the seal corners in place.

NOTE

While applying constant downward pressure on the corner (shown with red arrow), pull the red tab down and away from the seal. Do this on all 4 corners.

Figure 8.



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Repair Procedure (Continued)

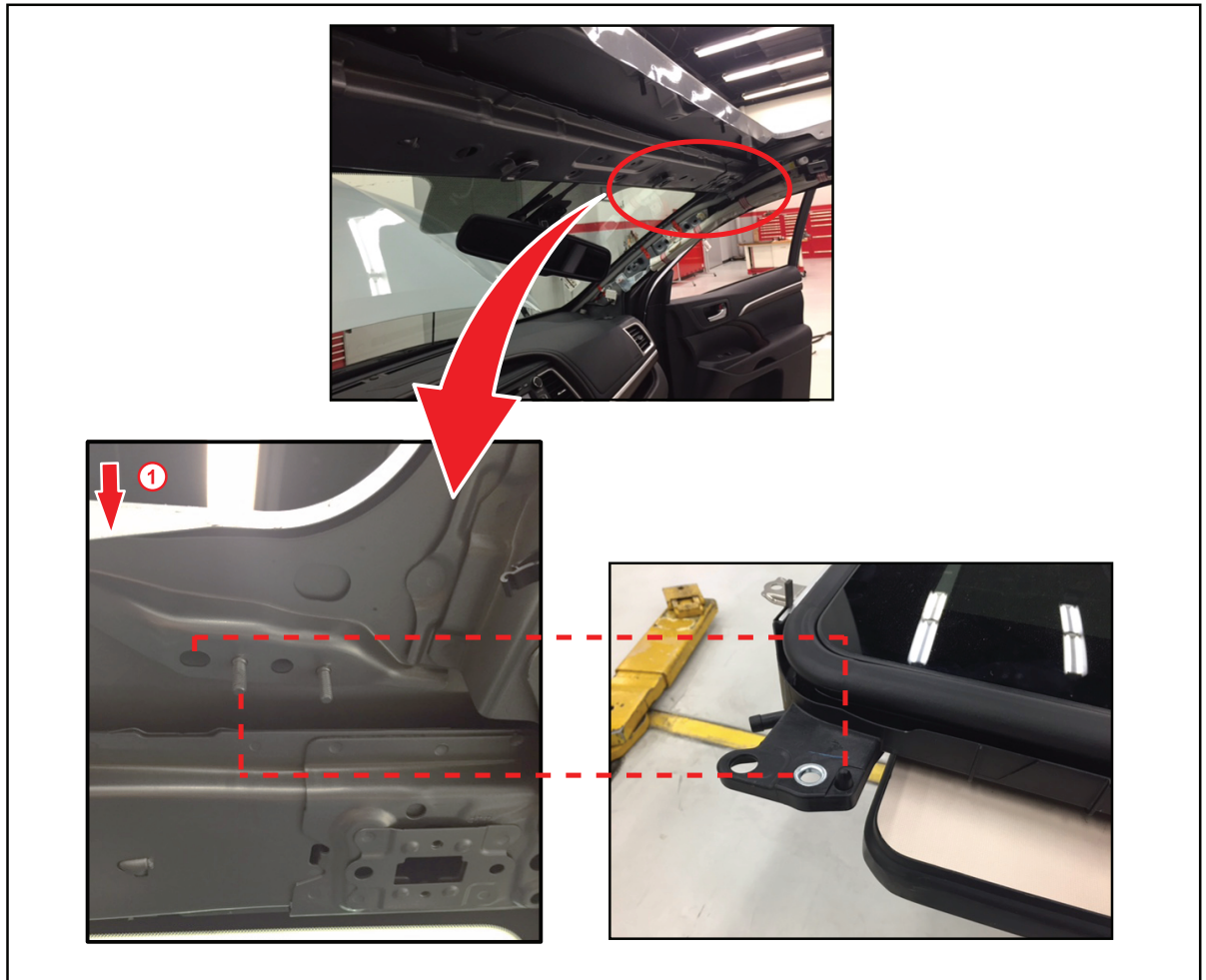
6. Locate and position housing into vehicle.

NOTE

It is recommended that more than 1 person is used to ensure proper housing placement due to weight.

- A. Walk housing into vehicle.
- B. While pushing housing into place, it is **CRITICAL** that the alignment pins on the housing are not damaged and are centered into the recess in the vehicle's roof structure. Once the housing is aligned, hand-tighten **ALL** bolts into the roof structure to hold the housing in place.

Figure 9. Front

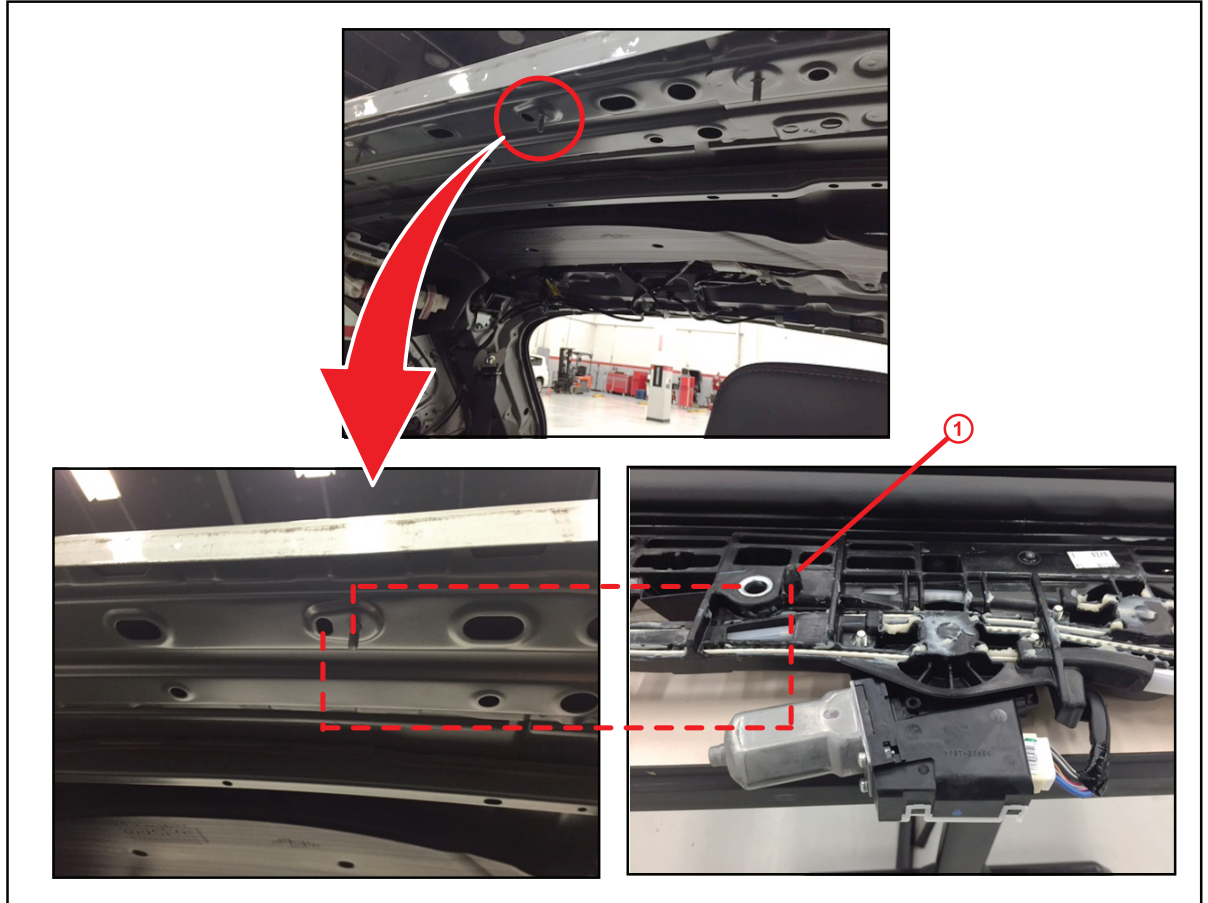


1	Front of Vehicle
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Repair Procedure (Continued)

Figure 10. Rear



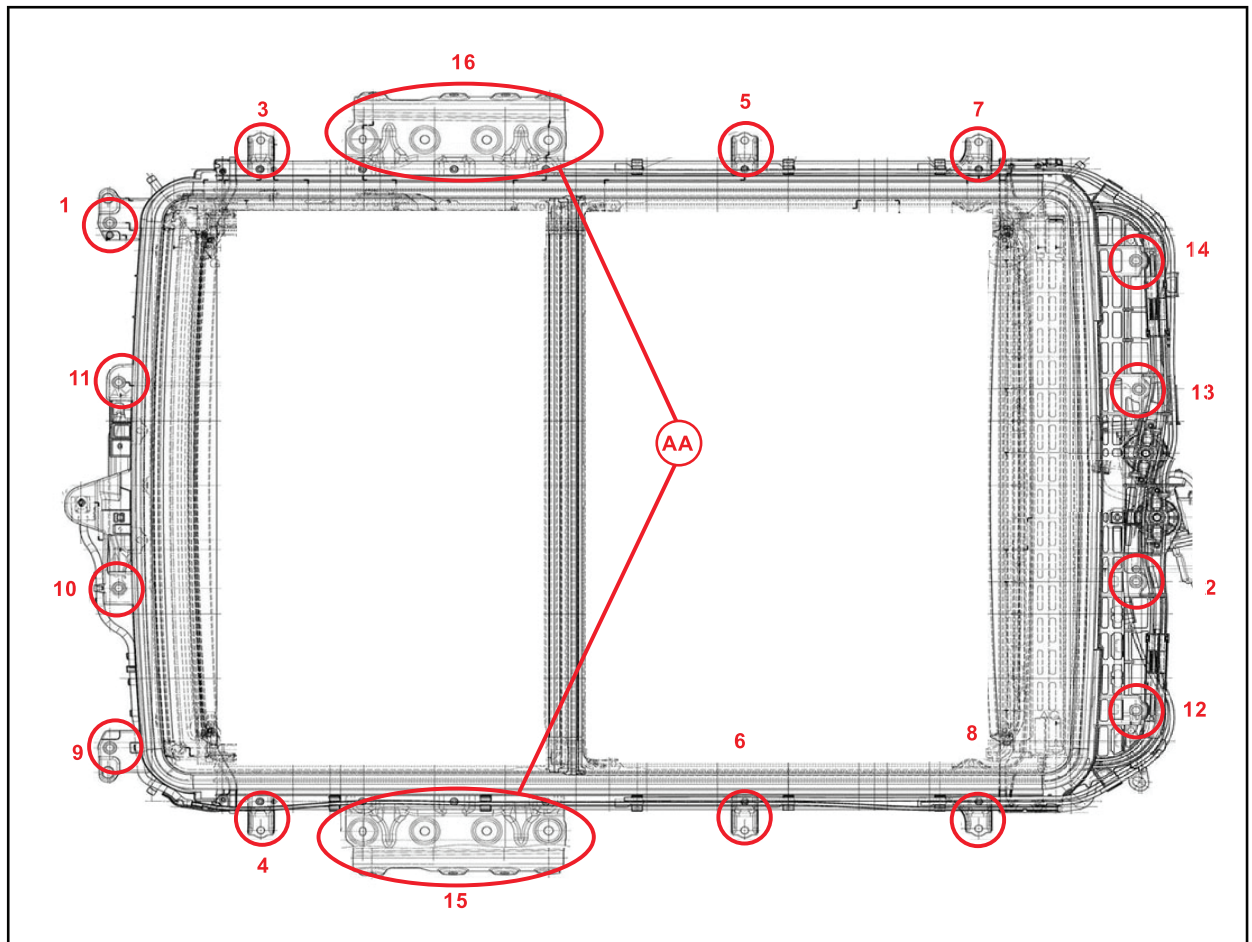
1	Alignment Pin
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Repair Procedure (Continued)

7. Torque the housing using the below attached sequence.

Figure 11.



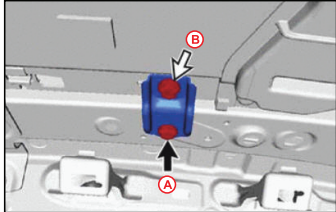
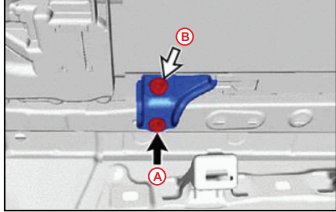
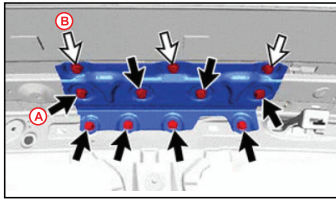
AA	Large Side Brackets
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HINT

- Make sure to have consistent upward pressure on the housing when tightening the bolts.
- It is **IMPORTANT** that the main large side brackets, referenced above, are tightened to the housing first, then upward onto the roof structure, then outward to the body.
- While installing the housing, Do **NOT** install a couple of bolts and let the housing hang. This could potentially damage the housing and cause warping, which could lead to poor seal fitment.

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Repair Procedure (Continued)

TORQUE SEQUENCE NUMBER	BOLT "A" TORQUE SPEC	BOLT "B" TORQUE SPEC	DETAILED VIEW
1	5.5 N*m (56 kgf*cm, 49 in*lbf)	-	-
2			
3	8.0 N*m (82 kgf*cm, 71 in*lbf)	5.4 N*m (55 kgf*cm, 48 in*lbf)	
4			
5			
6			
7	8.0 N*m (82 kgf*cm, 71 in*lbf)	5.4 N*m (55 kgf*cm, 48 in*lbf)	
8			
9	5.5 N*m (56 kgf*cm, 49 in*lbf)	-	-
10			
11			
12			
13			
14			
15	18.5 N*m (189 kgf*cm, 14 ft*lbf)	5.4 N*m (55 kgf*cm, 48 in*lbf)	
16			

8. Install glass onto housing and center/align per Repair Manual instructions.
9. Reassemble vehicle in reverse order using Repair Manual instructions

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

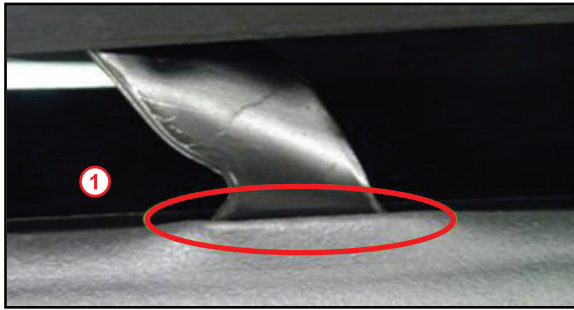
- 2014 Highlander:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#) / [Installation](#)”

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Repair Procedure (Continued)

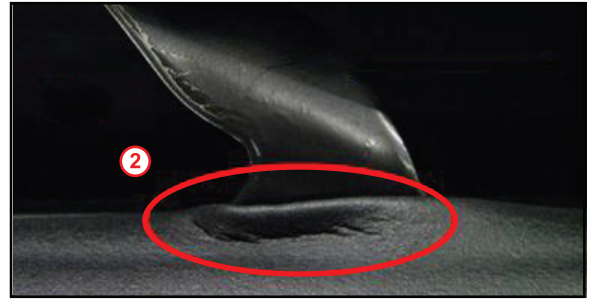
- 2015 Highlander:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#) / [Installation](#)”
 - 2014 Highlander HV:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#) / [Installation](#)”
 - 2015 Highlander HV:
Vehicle Exterior – Sliding Roof/Convertible – “Sliding Roof / Convertible: Sliding Roof Housing (for Panoramic Moon Roof): [Removal](#) / [Installation](#)”
10. Confirm the deflection of the seal (see video “Incorrect Deflection”). The seal should have even deflection on the glass link as shown. If deflection is not seen as shown below, a new seal must be ordered and the seal installation process must be started again.
[Incorrect Deflection.wmv](#)

Figure 12.



1	OK
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Figure 13.



2	NG
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